

CLAIMS (UNAMENDED)

Although not amended, the claims are reproduced below for the Examiner's convenience.

1. (Previously Presented): An aqueous sizing composition for insulation products based on mineral wool, comprising

a water-dispersible or water-emulsifiable epoxy resin of a glycidyl ether, wherein the epoxy resin is prepared by the reaction of epichlorohydrin with an alcohol,

an amine hardener,

a silane coupling agent, and

an accelerator selected from the group consisting of imidazoles, imidazolines and mixtures thereof.

2. (Previously Presented): The composition according to claim 1, wherein the accelerator is selected from the group consisting of imidazole, 1-methylimidazole, 2-methylimidazole, 2-phenylimidazole, 2-ethyl-4-methyl-imidazole, 4,4'-methylenebis (2-ethyl-5-methylimidazole) and 2-ethyl-N-phenylimidazoline.

3. (Canceled).

4. (Previously Presented): The composition according to claim 1, wherein the resin has an Epoxy Equivalent Weight of between 150 and 2000.

5. (Previously Presented): The composition according to claim 1, wherein the epoxy resin has a water dilutability, at 20°C, of at least 500%.

6. (Previously Presented): The composition according to claim 1, wherein the hardener is selected from the group consisting of aliphatic polyamines, polyglycoldiamines, cycloaliphatic polyamines, and aromatic polyamines.

7. (Previously Presented): The composition according to claim 1, wherein the accelerator is present in an amount of 0.1 to 5 parts by weight of dry matter per 100 parts by weight of dry matter of epoxy resin/hardener.

8. (Previously Presented): The composition according to claim 1, wherein the hardener has an amine equivalent weight/H ratio of 20 to 300.

9. (Previously Presented): The composition according to claim 1, which includes the following additives, per 100 parts by weight of dry matter of resin/hardener: up to 2 parts, of a coupling agent; and/or up to 20 parts, of an oil.

10. (Previously Presented): A process for manufacturing a thermal and/or acoustic insulation product, based on mineral wool, comprising: a) forming mineral fibres from a molten mineral composition; b) spraying a sizing composition according to claim 1 onto the fibres obtained at a); c) collecting the fibres in the form of a sheet; and d) subjecting the sheet to a heat treatment at a temperature below about 260°C.

11. (Previously Presented): The process according to claim 10, wherein an accelerator is mixed with the other constituents of the size before being spraying onto the fibres.

12. (Previously Presented): The process according to claim 10, wherein an accelerator is applied separately from the spraying of the other constituents of the size onto the fibres.

13. (Previously Presented): A thermal and/or acoustic insulation product based on mineral wool, prepared with a sizing composition according to claim 1.

14. (Previously Presented): The insulation product according to claim 13, comprising from 0.5 to 15% cured binder.

15. (Previously Presented): The insulation product according to claim 13, which includes a veil of mineral fibres, having a weight of between 10 and 300 g/m², placed on at least one of the external faces of the said product, wherein said veil comprises at least 1% by weight of cured binder obtained from the sizing composition.

16. (Previously Presented): A method for improving the mechanical strength after aging of an insulation product based on mineral wool comprising applying the sizing composition according to claim 1 to the insulation product.

17. (Previously Presented): The method of claim 15, wherein the wool is glass wool or rock wool.

18. (Previously Presented): The composition of claim 4 wherein the Epoxy Equivalent Weight has maximum value of 300.

19. (Previously Presented): The composition according to claim 1, wherein the hardener is selected from the group consisting of diethylenetriamine, triethylenetetramine, tetraethylene-pentamine, 1,3bis(aminomethyl) cyclohexane, 4,4-diaminocyclohexylmethane, methylenediamine, 2,4-diaminocyclohexanol, m-phenylenediamine, m-xylylenediamine, diethyltoluenediamine, diaminodiphenylsulphone, dicyandiamine, and mixtures thereof.

20. (Previously Presented): The composition according to claim 1, wherein the composition is sprayable.

21. (Previously Presented): The composition according to claim 1, wherein the alcohol is a polyol.

22. (Previously Presented): The composition according to claim 1, wherein the alcohol is a diol.

23. (Previously Presented): The composition according to claim 1, further comprising: a petroleum oil.

24. (Previously Presented): The composition according to claim 1, wherein the accelerator is 2-methylimidazole.

25. (Previously Presented): The composition according to claim 1, comprising: a bisphenol epoxy resin of the glycidyl ether type and 2-methylimidazole.

26. (Previously Presented): The composition according to claim 1, wherein the accelerator is 2-methylimidazole and is present in an amount of 0.1-1 parts by weight per 100 parts by weight of dry matter; the silane coupling agent is present in an amount of 0.5-2 parts by weight per 100 parts by weight of dry matter; and the composition further comprises a petroleum oil.